# Technical Data

| | | DVB-S | | DVB-T | DVB-C | |
|---|---|---|---|---|---|---|
| **TYPE** | | **UFS 940sw** | **UFS 640si** | **UFT 675sw** | **UFC 960sw** | **UFC 662sw** |
| Order no. | | 20210151 | 20210138 | 20210140 | 26210228 | 20210150 |
| Colour | | Black | Silver | Black | Black | Black |
| **RF range** | | | | | | |
| Input frequency range | MHz | 950-2,150 | 950-2,150 | 174-230 and 470-862 | 47-862 | 47-862 |
| Loop-through range | MHz | - | - | 47-862 | 44-83 | 44-83 |
| Channel bandwidth | MHz | - | - | 7/8, automatically switchable | - | - |
| Modulation type | | - | - | COFDM 2k, 8k | QAM 16, 32, 64, 128, 256 | QAM 16, 32, 64, 128, 256 |
| Mapping | | - | - | QPSK, 16 QAM, 64 QAM | - | - |
| Guard Interval | | - | - | 1/4, 1/8, 1/16, 1/32 | - | - |
| FEC | | - | - | 1/2, 2/3, 3/4, 5/6, 7/8 | - | - |
| Input level range | dBµV | 44-83 | 44-83 | 28-86 (at 16 QAM) | - | - |
| **TV System Video** | | | | | | |
| Modulation, FEC, demultiplexer | | DVB-S/DVB-S2 standard | DVB-S standard | DVB-T standard | DVB-C standard | DVB-C standard |
| Video resolution | | CCIR 601 (720 x 576 lines), 576p, 720p, 1080i | CIR 601 (720 x 576 lines), 576p, 720p, 1080i | CCIR 601 (720 x 576 lines), 576p, 720p, 1080i | CCIR 601 (720 x 576 lines), 576p, 720p, 1080i | CCIR 601 (720 x 576 lines), 576p, 720p, 1080i |
| Input data rate | MSymb/s | 2-45 (30 at DVB-S2/8PSK) | - | 5-32 | 1-7 | 1.7-7 |
| Video decoding | | MPEG-1 and MPEG-4 compatible | MPEG-1 and MPEG-2 compatible | MPEG-1 and MPEG-2 compatible | MPEG-2, MPEG-4 compatible | MPEG-1 and MPEG-2 compatible |
| S/N | dB | > 53 | > 53 | > 53 | > 53 | > 53 |
| **TV System Audio** | | | | | | |
| Decoding | | AC 3, MPEG-2 and MPEG-4, Layer 1, 2 and 3 | MPEG-1 and MPEG-2, Layer 1 and 2 | MPEG-1, Layer 1 and 2 | MPEG-1, Layer 1, 2 and 3, Dolby Digital | MPEG-1, Layer 1 and 2 |
| Sampling rate | kHz | 32/44.1/48 | 32/44.1/48 | 32/44.1/48 | 32/44.1/48 | 32/44.1/48 |
| S/N | dB | > 65 | > 65 | > 65 | > 65 | > 65 |
| **Power supply** | | | | | | |
| Mains voltage Mains voltage | $V_{AC}$/Hz | 230 ± 15 %/50 | 100-240/50-60 | 100-240/50-60 | 100-240/50-60 | 100-240/50-60 |
| DC voltage | V | 12 | 12 | - | - | - |
| Power consumption (operation/stand-by) | W | < 26/0.5 | < 26/< 1 | < 12/< 1 | < 26/ < 1 | < 15/ < 1 |
| Supply voltage | V/mA | 14/18, Max. 400 | 14/18, Max. 400 | 5/75 | - | - |
| Control signal | kHz | 22; DiSEqC™1.0/ 1.1/1.2/USALS, CAP command set, SCR single-cable system | 22; DiSEqC™1.0, SCR single-cable system | - | - | - |
| **Connections** | | | | | | |
| Sat-IF input/output (loop-through) | | 2 x F-type socket | 2 x F-type socket | IEC socket/pin | IEC socket/pin | IEC socket/pin |
| TV/VCR | | - | 2 x Scart socket | 2 x Scart socket | 2 x Scart socket | 1 x Scart socket |
| Video output (analogue) | | 1 x Cinch socket | 1 x Cinch socket | 1 x Cinch socket | 3 x Cinch socket (YPbPr)/1 x Cinch socket composite | 1 x Cinch socket |
| Video output (digital) | | 1 x HDMI | 1 x HDMI | 1 x HDMI | 1 x HDMI | 1 x HDMI |
| Audio output (analogue) | | 2 x Cinch socket | 2 x Cinch socket | 2 x Cinch socket | 2 x Cinch socket | 1 x Cinch socket |
| Audio digital output (electrical) | | - | 1 x Cinch socket | 1 x Cinch socket | - | 1 x Cinch socket |
| Audio digital output (optical) | | Standard optical (SPDIF) | - | - | Standard optical (SPDIF) | - |
| Common Interface/decoding system | | For 1 CA module/- | - | - | 1/Conax 5.0 embedded | 1/- |
| Data interface | | RJ 11 socket | RJ 11 socket | RJ 11 socket | RJ 45, Ethernet 10/100BaseT, 2 x USB 2.0, RS 232 | RJ 11 socket |
| **General** | | | | | | |
| Permissible ambient temperature | °C | Max. +5 to +40 | Max. +5 to +40 | Max. +5 to +40 | Max. +5 to +40 | Max. +5 to +40 |
| Dimensions (W x H x D) | mm | 226 x 38 x 170 | 255 x 47 x 190 | 255 x 47 x 190 | 342 x 67 x 273 | 225 x 47 x 190 |
| Weight | kg | < 1.5 | 1.0 | 1 | approx. 3 | < 2 |

99811404/2/1009/JH/PF - Technical data subject to change!

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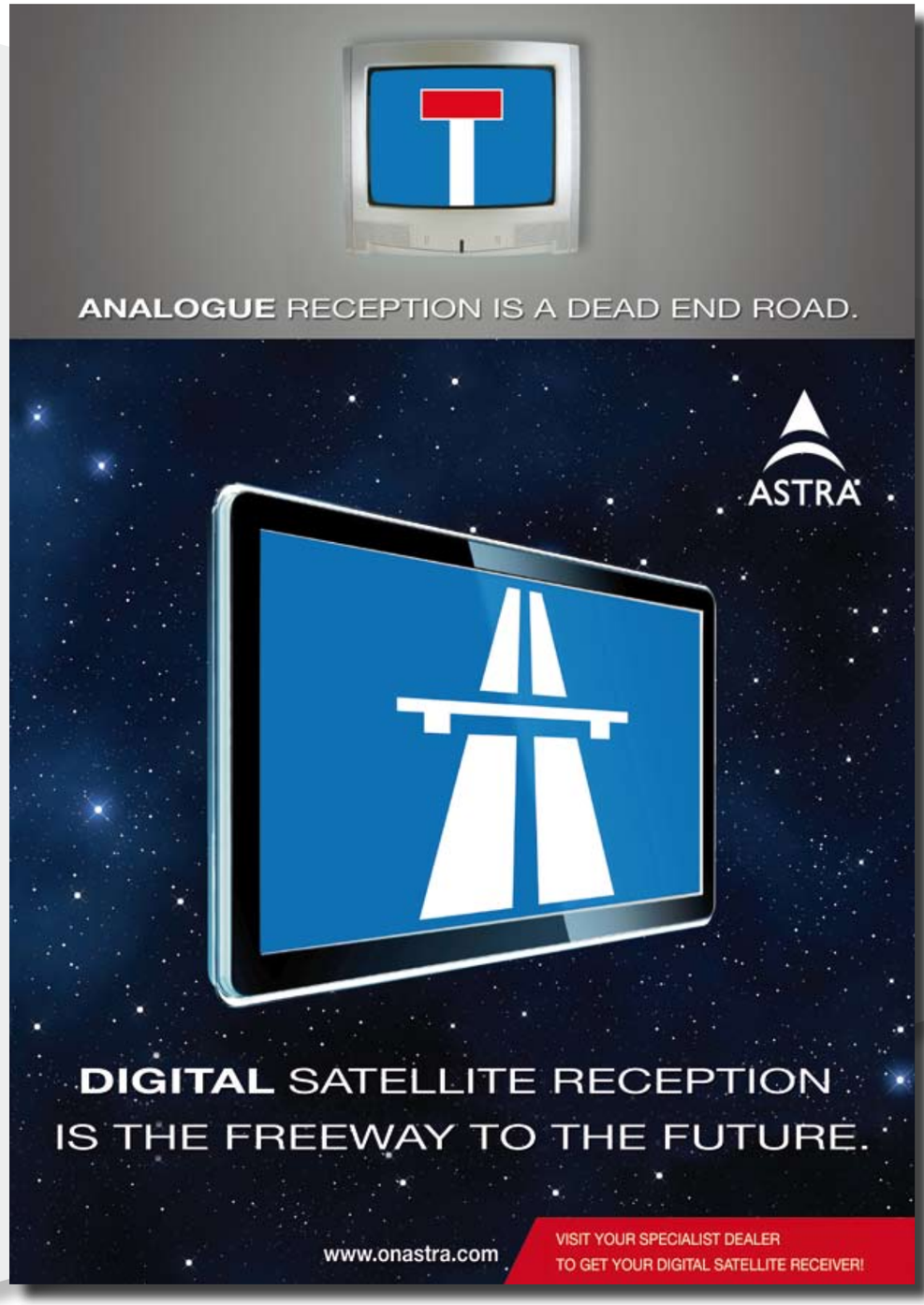
KATHREIN
Antennen · Electronic

# Receiver Programme 2009/2010

S/T/C
Satellite Terrestrial Cable

Gripping technology for sharper television

KATHREIN
Antennen · Electronic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# HDTV

**High Definition Television (HDTV)**
High Definition Television (HDTV) is currently on everyone's lips - but what role does this technology play in consumer electronics, which advantages does it bring and which devices are required for reception?

▶ **Enhanced video quality**
In terms of TV image resolution and sharpness, HDTV constitutes an enormous improvement compared to the previous PAL TV pictures. With sharper contours, richer colours, more detailed images and details that were up to now not visible, HDTV particularly captivates through its downright "live" character. The result is a brilliant image, in a quality never before seen in living rooms.

▶ **Cinema-format image**
HDTV is a pure 16:9 format which approximates human viewing patterns more than conventional 4:3 broadcasting does. Black bars during films are thus passé.

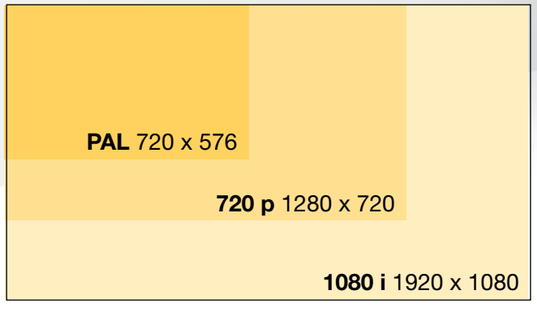
▶ **Home cinema - for the ears as well**
In HDTV, sound is transmitted in Dolby Digital 5.1 or Dolby Digital Plus, a guarantee for unadulterated audio pleasure in your home cinema

▶ **What do I need to get HDTV?**
To receive the high-quality transmission standard HDTV, appropriate components are required. The basic requirement for reception via satellite reception and distribution system suitable for DVB-S as well as an HD-ready DVB-S receiver (e.g. UFS 902).

At Kathrein, all current feed systems of the UAS series are suitable for digital reception and have been designed for the new transmission standard DVB-S2 - retrofitting of the reception system is not required.

Furthermore, the Sat-IF distribution system must be suitable for the transmission of digital satellite signals. Kathrein's current EXR xxx series switching matrices and multi-switches as well as the VWS xxx Sat-IF amplifiers are all designed for digital transmission. Thus, it is not necessary to replace the distribution system components. In addition, the new single-cable system featuring specially designed compatible Kathrein components is also suitable for HDTV.

▶ **The difference between PAL and HDTV**
HDTV is characterised by a significantly greater number of lines on the TV screen. The usual European PAL standard reaches a resolution of 576 lines vertically and 720 lines horizontally. High-definition television offers a resolution up to five times higher than PAL standard TV, yielding more definition und plasticity. HDTV images can contain up to five times as many pixels, i.e. 2 million pixels than conventional PAL images, with approximately only 400,000 pixels.




# HDTV Receiver Features

Kathrein's current range of HDTV satellite receivers is suitable for reception of digital satellite TV and radio programmes and can receive both high-resolution and standard TV. The units are equipped with a high-quality housing, functional design and a wide range of features:

▶ Guided first installation

▶ User-friendly user interface

▶ Kathrein easy-use EPG/Premium tvtv EPG: Clearly structured, functional television guide featuring timer programming.

▶ Pre-programmed programme list allows immediate viewing without a programme scan.

▶ Software downloads via satellite - quickly and conveniently from your living room - and with a USB stick

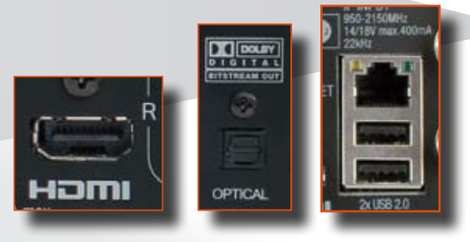
▶ Future-proof due to Common Interface

▶ A low power consumption with a stand-by mode power consumption < 1 Watt protects the environment

**Stand-by mode power consumption < 1 Watt**

▶ Mains switch

▶ Wide range of connections: HDMI, YPbPr, video-composite, Scart, optical audio output for Dolby Digital data stream (AC 3), USB for software updates




▶ USB 2.0 port for external storage media such as USB sticks or USB hard disks

# HDTV Twin DVB-S Receivers with Hard Disk
# UFS 922si (silver) and UFS 922sw (black)

## High-end receivers

**Up to 14-day preview with topic search function e.g. actors, directors, genre, etc.**

The UFS 922 is equipped with two independent tuners as well as an integrated hard disk with a 500-Gbyte memory capacity. Depending on the broadcaster's data rate, this feature allows one to record approx. 300 hours of standard TV and radio broadcasts, as well as roughly 100 hours of HDTV broadcasts and to view these either in real-time or time-shifted (timeshift function) without any loss in quality.

The integrated Premium tvtv-EPG additionally makes it possible to sort programme information according to categories and to create an administrate one's own programme tips.

The receivers are available in black and silver.

Stand-by mode power consumption < 1 Watt

**Premium *tvtv*-EPG**

**With HDMI and Ethernet port**

**500 GByte - 300 hours worth of standard recordings and 100 hours HDTV recordings***

*Depending on the data rate of the broadcast being transmitted

43.5 cm

576p 720p **1080i**

**Upscaler for a sharper image**

DVB S/S2 · HD TV · TWIN · Premium tvtv EPG · HDMI · HDD 500GB · Time Shift · OTR · Zap-W · 16 Display · JPEG · MP3 · VT 800 · OSD · OTA · CI 2x · Ethernet · USB 2.0 · LINUX · on off · Auto. SW · Auto. Prog.-L.

## Features

- Reception of digital satellite TV and radio programmes in DVB-S2 (HDTV) and DVB-S transmission standards
- Video decoding of MPEG-2 and MPEG-4/H.264 signals (HDTV)
- Two independent Sat HDTV tuners with loop-through output
- Integrated 500-GByte hard disk to record over 300 hours of standard TV broadcasts as well as approx. 100 hours of HDTV recordings [1)]
- Recording of radio broadcasts on the integrated 500-GByte hard disk
- Timeshift function
- Permanent timeshift (ongoing recording of the selected programme)
- 16-digit alphanumeric display with status icons to show the programme names and programme information
- Premium tvtv-EPG (Electronic Programme Guide) for 14 days with detailed information for approximately 60 programmes
- Extended EPG functions: Sorting according to categories, extensive search function, creation and administration of programme tips
- Recording list with chapter menu and pictures
- Multimedia archive for pictures and MP3 playback
- Common Interface for two CA modules with dual decryption [2)]
- HDMI output for top video quality on your flat-screen TV set
- Upscaler to upscale Pal signals to 576p, 720p and 1080i as well as automatically
- Cinch sockets for AV signal (CVBS, stereo-audio)
- Two USB 2.0 ports on the rear panel for connection of external USB storage media
- One USB 2.0 port on the front panel for software updates via USB stick
- Ethernet interface for multi-media applications and to link the receiver into a network
- Guided first installation
- Pre-programmed programme list allowing immediate viewing without requiring a programme scan
- Integrated FTP/UPNP server
- Displays broadcaster logos in various on-screen displays
- Numerous timer recordings programmable (once, daily, weekly, user-defined and serial timers)
- 8 favourite programme lists each for TV and radio
- YPbPr, TV and VCR Scart output
- CVBS, RGB and Y/C signal output programmable on Scart socket (TV)
- Optical audio output for Dolby * Digital data stream (AC 3)
- Videotext decoder with 800-page memory capacity
- Language selection for programmes broadcast in several languages
- Suitable for software updates (operational software and programme list separately) via satellite, USB stick and PC
- On-screen display (OSD) in 10 languages (D, GB, F, I, E, CZ, NL, PL, TR, RUS)
- DiSEqC™1.0, 1.1, 1.2, 1.3 and SCR single-cable control signals
- LINUX-based operational system
- Multi-functional tuner on the front panel for easy operation
- Mains switch
- 4,000 programme memory positions
- Delivery scope: Infra-red remote control, batteries, HDMI cable, Scart cable, manual, safety notes, power cable, loop-through cable

1) Depending on the data rate of the broadcast being transmitted
2) CA modules and smart cards are not supplied
* Dolby is a registered trademark of Dolby Laboratories
Technical data subject to change

Satellite · Terrestrial · Cable

# HDTV Satellite Receivers
# UFS 912si (silver) and UFS 912sw (black)

## Prepared for reception and timeshift

NEW

Stand-by mode power consumption < 1 Watt

Recording/timeshift on external hard disk

Premium *tvtv*-EPG [1)]

HDMI and Ethernet ports

The UFS 912 HDTV receiver is suitable for the reception of digital satellite TV and radio programmes. This receiver allows you to receive both high-definition (HD) and standard-definition (SD) television.

The receiver features a Premium tvtv EPG, which is loaded when a USB hard disk is connected. The EPG is not only a well-structured electronic TV guide, but also offers a facility to take programmes from the respective EPG and add them to the timer. In addition, it is possible to sort programme information according to categories and to create and administrate one's own programme tips.

What's more, the Premium tvtv-EPG also features an extensive search function which enables one, for example, to search for reruns, actors or key words.
The receiver's 16-digit alphanumeric display shows the programme names, while 16 status icons inform you at a glance on the current receiver status (e.g. Dolby Digital, HD, timer ...).

The set-top box is equipped with an HDMI interface which allows the receiver to be connected to the HDMI interface on a suitable flat-screen TV for optimal viewing comfort.
A YPbPr connection, a video composite connection and two Scart connections are additionally provided. An optical audio output enables transmission of the Dolby Digital data stream AC 3 to a Dolby Digital stereo system.

The USB port on the rear panel allows an external USB hard disk to be connected, enabling films and radio broadcasts to be recorded without any loss in quality. Time-shifted viewing is also possible.
An additional USB port is featured on the front panel, through which you can update receiver software using a USB stick.

The operational system is LINUX-based.

The receivers are available in silver and black.

DVB S/S2 · HD TV · Premium tvtv EPG [1)] · DVR Ready · Time Shift · OTR · JPEG · MP3 · PIP · 16 Display · OSD · VT 800 · CI 2x · HDMI · Ethernet · USB 2.0 · OTA · Auto. SW · Auto. Prog.-L. · LINUX · on off

### Features

- Reception of digital satellite TV and radio programmes in DVB-S2 (HDTV) and DVB-S transmission standards
- Video decoding of MPEG-2 and MPEG-4/H.264 signals (HDTV)
- 16-digit alphanumeric display with status icons to show the programme names and programme information
- Premium tvtv-EPG (Electronic Programme Guide) covering up to 14 days with detailed information for approximately 60 programmes [1)]
- Extended EPG functions: Sorting according to categories, extensive search function, creation and administration of programme tips
- Option to record TV and radio broadcasts on an external USB hard disk
- Timeshift function using an external USB hard disk
- Recording list with chapter menu and pictures [1)]
- Multimedia archive for pictures and MP3 playback [1)]
- Common Interface for two CA modules [2)]
- HDMI output for top video quality on your flat-screen TV set
- Supports CEC control protocol on HDMI interface
- Upscaler converts PAL signal to 576p, 720p, 1080i, 1080p as well as automatically
- Integrated SD card reader
- Cinch sockets for AV signal (CVBS, stereo-audio)
- Two USB 2.0 ports on the rear panel for connection of external USB storage media
- One USB 2.0 port on the front panel for software updates via USB stick
- Ethernet interface for multi-media applications and to link the receiver into a network
- UPNP support via network interface for audio and video streaming
- Guided first installation
- Pre-programmed programme list - immediate viewing without having to perform a programme scan
- Automatic download of software and programme lists
- Displays broadcaster logos in various on-screen displays [1)]
- Any number of timer recordings can be programmed (once, daily, weekly, user-defined and serial timers)
- 8 favourite programme lists each for TV and radio
- YPbPr, TV and VCR Scart output
- CVBS, RGB and Y/C signal output programmable on Scart socket (TV)
- Optical audio output for Dolby * Digital data stream (AC 3)
- Videotext decoder with 800-page memory capacity and videotext generation (only via Scart)
- Audio language selection for programmes broadcast in several languages
- Suitable for software updates (operational software and programme list separately) via satellite, USB stick and PC
- On-screen display (OSD) in 10 languages (D, GB, F, I, E, CZ, NL, PL, TR, RUS)
- LINUX-based operational system
- DiSEqC™1.0/1.1/1.2/1.3 and SCR single-cable system control signals
- Mains switch
- Delivery scope: Infra-red remote control, batteries, HDMI cable, user manual, safety notes, power cable

[1)] Function only available if an external hard disk has been connected
[2)] CA modules and smart cards not included in delivery scope
* Dolby is a registered trademark of Dolby Laboratories

Technical data subject to change

Satellite · Terrestrial · Cable

# HDTV Satellite Receivers
# UFS 903si (silver) and UFS 903sw (black)

## Energy-efficient unit

NEW

Qualität aus Deutschland – Made in Germany

Stand-by mode power consumption < 1 Watt

**Recording on external hard disk**

**Kathrein easy-use EPG**

**HDMI port**

The UFS 903 HDTV receiver is suitable for the reception of digital satellite TV and radio programmes.

The receiver processes both standard television and high definition television. The built-in Common Interface can accommodate one CA module to decode pay-TV programmes. Programme names are shown on the 12-digit alphanumeric display.

Due to its HDMI interface, the receiver can be connected to flat-screen TV for optimal viewing comfort. An optical and electrical audio output allow transmission of the Dolby Digital data stream AC 3 to a Dolby Digital audio system.

The integrated Kathrein easy-use EPG is not only a well-structured electronic TV magazine, but also offers the possibility to take programmes from the respective EPG and include them in the timer. Automatic downloading of new software and new programme lists ensure top customer service.

What's more, the USB interface on the receiver's rear panel enables connection of external USB storage media (USB stick, hard disk), allowing you to record TV and radio broadcasts or upload software updates.

The receivers are available in silver and black.

Upscaler for a sharper image

Scheduled delivery:
October 2009

DVB S/S2 · HD TV · KATHREIN KOMFORT EPG · 12 Display · DVR Ready** · HDMI · VT 800 · OSD · OTA · CI · USB 2.0 · on off · Auto. SW · Auto. Prog.-L.

## Features

- Reception of digital satellite TV and radio programmes in the DVB-S2 (HDTV) and DVB-S transmission standard
- Video decoding of MPEG-2 and MPEG-4/H.264 signals (HDTV)
- 12-digit alphanumeric display of programme names (TV and radio)
- Kathrein easy-use EPG with intuitive timer programming [1)]
- Common Interface for one CA module [2)]
- HDMI output for top video quality on your flat-screen TV
- Upscaler to upscale PAL signal (576i) to 576p, 720p and 1080i
- Option to record TV and radio broadcasts on an external USB hard disk
- Guided first installation
- Pre-programmed programme list allows immediate viewing without a programme scan
- Automatic download of software and programme lists
- Optical and electrical audio output for Dolby * Digital data stream (AC 3)
- Cinch sockets for AV signal (CVBS, stereo-audio)
- USB 2.0 port on the rear panel for software updates via USB stick
- 8 pre-programmed favourite programme lists each for TV and radio
- 1,000 timers (serial and interval)
- CVBS, RGB and Y/C signal output programmable on Scart socket (TV)
- Suitable for software updates (operational software and programme list separately) via satellite or USB stick
- Videotext decoder with 800-page memory capacity and videotext generation (only via Scart)
- Language selection for programmes broadcast in several languages
- On-screen display (OSD) in
- 10 languages (D, GB, F, I, E, CZ, NL, PL, TR, RUS)
- DiSEqC™1.0/1.1/1.2, USALS and SCR single-cable system control signals
- 4,000 programme memory positions
- Infra-red remote control with command set switching
- Facility to connect an external IR sensor (available as an accessory)
- Stand-by < 0.4 W
- Mains switch on front panel
- Delivery scope:
- Infra-red remote control, batteries, HDMI cable, user manual, safety notes, power cable

1) Display of information only if broadcast by the programme provider
2) CA modules and smart cards not included in delivery scope
* Dolby is a registered trademark of Dolby Laboratories
Technical data subject to change.

Satellite · Terrestrial · Cable

# HDTV Satellite Receivers
# UFS 904sw (black)

NEW

## “Hide-away receiver”

Quelität aus Deutschland
Made in Germany

Stand-by mode power consumption < 1 Watt

**Recording on external hard disk**

**Kathrein easy-use EPG**

**HDMI port**

The UFS 904sw HDTV receiver is suitable for reception of digital satellite TV and radio programmes. This receiver allows you to receive both high-definition and standard television.

Its built-in Common Interface can accommodate one CA module for pay-TV programmes. Due to its HDMI port, the unit can be connected to a flat-screen TV set, allowing you to enjoy optimal viewing comfort.

A built-in mounting bracket, compact dimensions and removable remote control sensor facilitate concealed installation.

The integrated Kathrein easy-use EPG is not only a well-structured electronic TV magazine, but also offers the possibility to take programmes from the respective EPG and add them to the timer. Automatic downloading of new software and new programme lists ensure top customer service. The USB 2.0 host interface on the receiver’s rear panel enables connection of an external USB hard disk, allowing you to record TV and radio broadcasts. Software and programme list updates can also be performed on this interface.

The receiver is available in black.

Upscaler for a sharper image

Removable IR sensor for concealed installation

DVB S/S2 · HD TV · KOMFORT EPG · DVR Ready** · HDMI · VT 800 · OSD mehrsprachig · OTA · CI · USB 2.0 · ~ 230 V · 12 V · on off · Auto. SW · Auto. Prog.-L.

### Installation options

Scheduled delivery:
December 2009

### Features

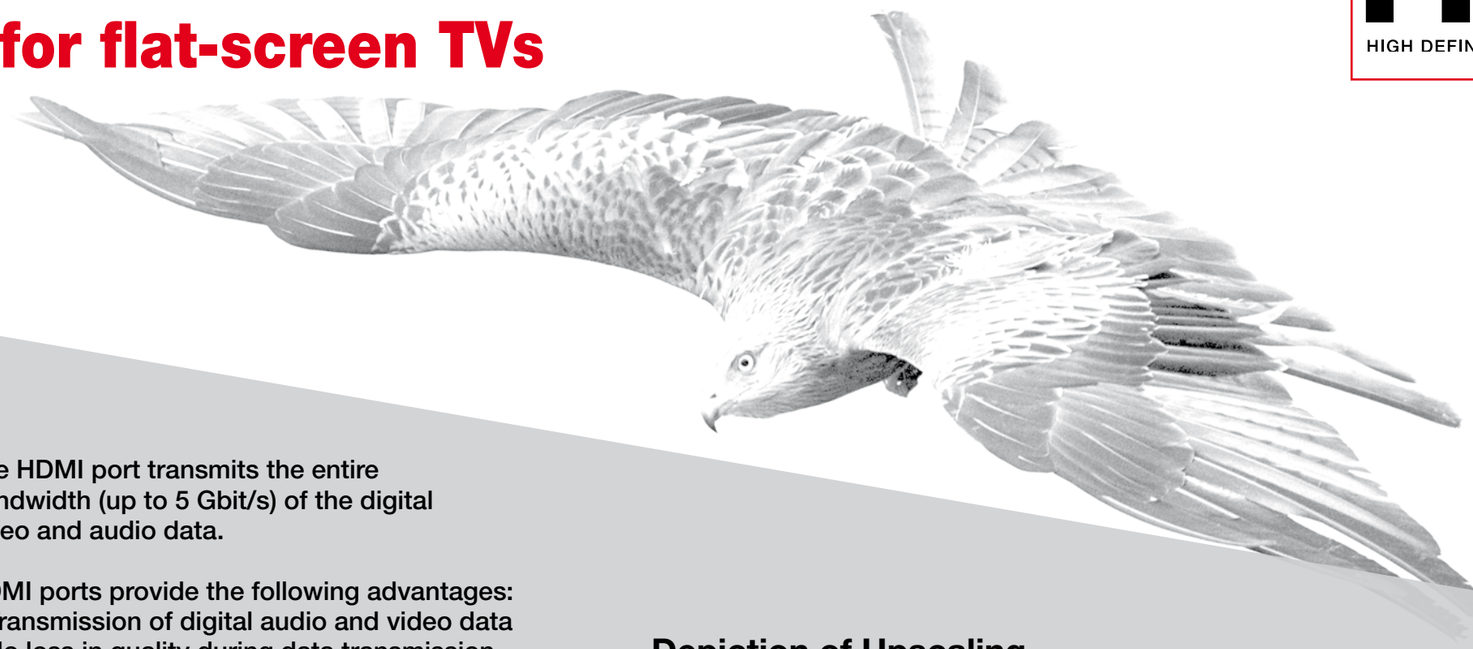
- Reception of digital satellite TV and radio programmes in the DVB-S2 (HDTV) and DVB-S transmission standards
- Video decoding of MPEG-2 and MPEG-4/H.264 signals (HDTV)
- Kathrein easy-use EPG with timer programming [1)]
- Common Interface for one CA module [2)]
- HDMI output for top video quality on your flat-screen TV
- Upscaler to upscale PAL signals (576i) to 576p, 720p and 1080i
- Integrated bracket and compact dimensions facilitate concealed installation
- Mounting accessories for on-surface or under-shelf installation
- Removable remote control sensor for concealed installation
- Guided first installation
- Pre-programmed programme list - immediate viewing without a programme scan
- Automatic software and programme list downloads
- Option to record TV and radio broadcasts on an external USB hard disk
- Optical audio output for Dolby * Digital data stream (AC 3)
- Cinch sockets for AV signal (CVBS, stereo-audio)
- One USB 2.0 port on the rear panel for software updates using a USB stick
- 8 favourite programme lists each for TV and radio
- 1,000 timers (serial and interval)
- Suitable for software updates (operational software and programme list separately) via satellite and USB stick
- Videotext decoder with 800-page memory capacity
- Language selection for programmes broadcast in several languages
- On-screen display (OSD) in 10 languages (D, GB, F, I, E, CZ, NL, PL, TR, RUS)
- DiSEqC™1.0/1.1/1.2, USALS, CAP command set and SCR single-cable system control signals
- 12 V supply for mobile use
- 230 V power supply unit for stationary use
- 31 pre-programmed satellites
- 4,000 programme memory positions
- Infra-red remote control with command set switching
- Stand-by < 0.5 W
- On/off switch (disconnection from 12 V supply)
- Delivery scope: Infra-red remote control, batteries, IR sensor, HDMI cable, 230 V/12 V power supply unit, user manual

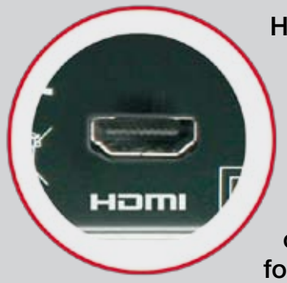
1) Display of information only if broadcast by the programme provider
2) CA modules and smart cards not included in delivery scope
* Dolby is a registered trademark of Dolby Laboratories
Technical data subject to change.

Satellite · Terrestrial · Cable

# DVB Satellite Receivers with an HDMI Port
# The ideal connection for flat-screen TVs

HIGH DEFINITION MULTIMEDIA INTERFACE





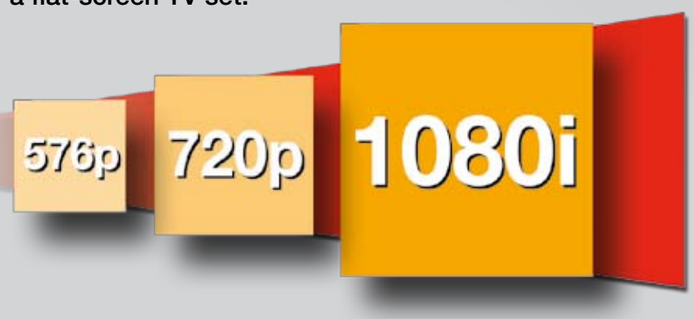

HDMI (High Definition Multimedia Interface) is a new interface embodying the ideal means to connect a receiver to a flat-screen TV for optimal viewing comfort.

Digital audio and video transmission allows the signal to be passed on from the receiver to the TV set without any loss in quality.

The HDMI port transmits the entire bandwidth (up to 5 Gbit/s) of the digital video and audio data.

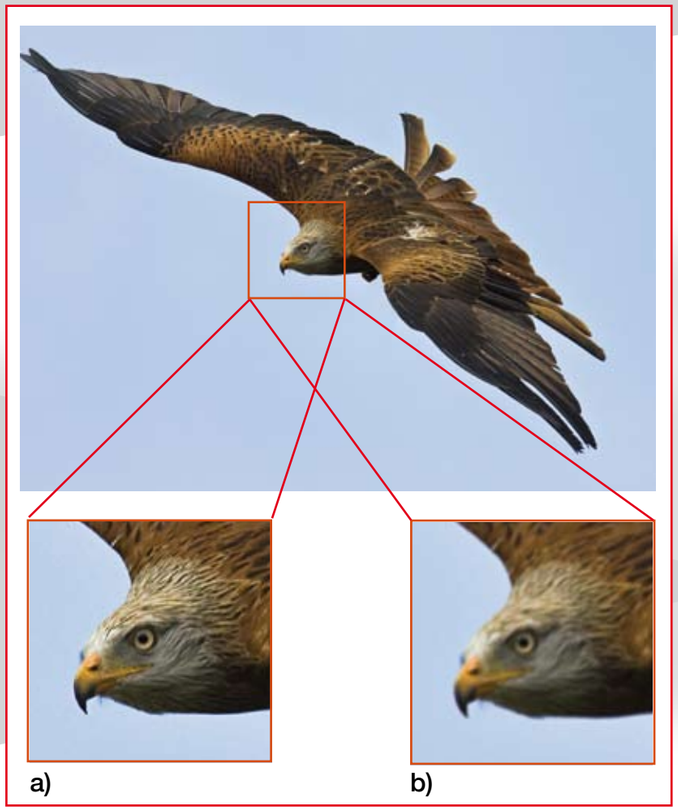
HDMI ports provide the following advantages:
- Transmission of digital audio and video data
- No loss in quality during data transmission
- HDMI works without an analogue/digital converter, guaranteeing the highest quality

The built-in upscaler upscales the picture to the desired resolution, “processing” it for a flat-screen TV set.




**Upscaler for a sharper image**

## Depiction of Upscaling




a) Connection: HDMI
Source of image: SD-TV (PAL)
Resolution: 1920 x 1080
Upscaling: On

b) Connection: Scart (RGB)
Source of image: SD-TV (PAL)
Resolution: 720 x 576
Upscaling: Not possible on Scart

# Combined DVB-S/T Receiver
# UFS 790si (silver) and UFS 790sw (black)

## For reception of DVB-S and DVB-T signals

Qualität aus Deutschland – Made in Germany

**HDMI port**
Upscales to 576i, 576p, 720p and 1080i

The receivers UFS 790si and UFS 790sw are combined receivers which enable reception of both digital satellite and digital terrestrial TV and radio programmes with one set-top box. A Conax decoding system is already embedded. Furthermore, the receivers are equipped with a Common Interface for a CA module, making it possible to decode additional Sat pay-TV programmes.

The HDMI interface allows one to connect the receiver to the HDMI interface on a flat-screen TV for optimal viewing comfort. The receivers possess a wide range of features such as a 16-digit alphanumeric display which shows programme names, electrical and optical audio outputs for Dolby Digital (AC3) and videotext with an 800-page memory capacity.

The receivers are available in silver and black.

DVB S · DVB T · KOMFORT EPG · HDMI · 16 Display · VT 800 · OSD mehrsprachig · OTA · CI · CONAX · on off · Auto. SW · Auto. Prog.-L.

Upscaler for a sharper image

## Features

- Reception of digital satellite and digital terrestrial TV and radio programmes
- 4,000 programme memory positions
- 16-digit alphanumeric display with status icons shows programme names and programme information
- Conax decoding system embedded
- Common Interface for a CA module [1]
- HDMI output for top video quality on your flat-screen TV set
- Upscaler to upscale Pal signals (576i) to 576p, 720p and 1080i
- Electronic programme guide (EPG) with detailed information [2]
- Guided first installation
- Automatic download of software
- Pre-programmed programme list - immediate viewing without a programme scan
- Suitable for software downloads via satellite and PC
- 4 favourite programme lists
- Automatic date and time setting via DVB data stream
- On-screen display (OSD) in 8 languages (D, GB, F, I, E, CZ, TR, NL)
- 8 timers; programmable via the EPG
- Language selection for programmes broadcast in several languages
- Optical and electrical audio output for Dolby * Digital data stream (AC 3)
- CVBS, Y/C and RGB signal output programmable on Scart socket
- Cinch sockets for L/R signal
- Videotext decoder with 800-page memory capacity and videotext generation (only via Scart)
- Programme scan
- Programme position sort function
- DiSEqC™1.0 and SCR single-cable control signals
- An active DVB-T antenna (e.g. BZD 30, BZD 40) can be remote-fed using the RF input
- Infra-red remote control
- Mains switch
- External IR sensor can be connected (available as an accessory)
- Delivery scope: Infra-red remote control, batteries, manual, safety notes, Scart cable, power cable

[1] CA module is not supplied
[2] Display of information only if broadcast by the programme provider
* Dolby is a registered trademark of Dolby Laboratories
Technical data subject to change.

Satellite · Terrestrial · Cable

# DVB-S Receiver
# UFS 733si (silver) and UFS 733sw (black)

## Future-proof due to Common Interface and embedded Conax

Quality aus Deutschland – Made in Germany

**HDMI port**
Upscales to 576i, 576p, 720p and 1080i

The UFS 733 receiver enables reception of digital satellite TV and radio programmes. A Conax decoding system is already embedded.
Furthermore, the receiver is equipped with a Common Interface for a CA module, making it possible to decode additional pay-TV programmes.
The HDMI interface allows one to connect the receiver to the HDMI interface on a flat-screen TV for optimal viewing comfort.

Additional features include a 16-digit alphanumeric display which shows programme names, electrical and optical audio outputs for Dolby Digital (AC 3) and videotext with an 800-page memory capacity.

The receivers are available in silver and black.

DVB S · HDMI · KATHREIN KOMFORT EPG · 16 Display · VT 800 · OSD mehrsprachig · OTA · CI · CONAX · on off · Auto. SW · Auto. Prog.-L.

Upscaler for a sharper image

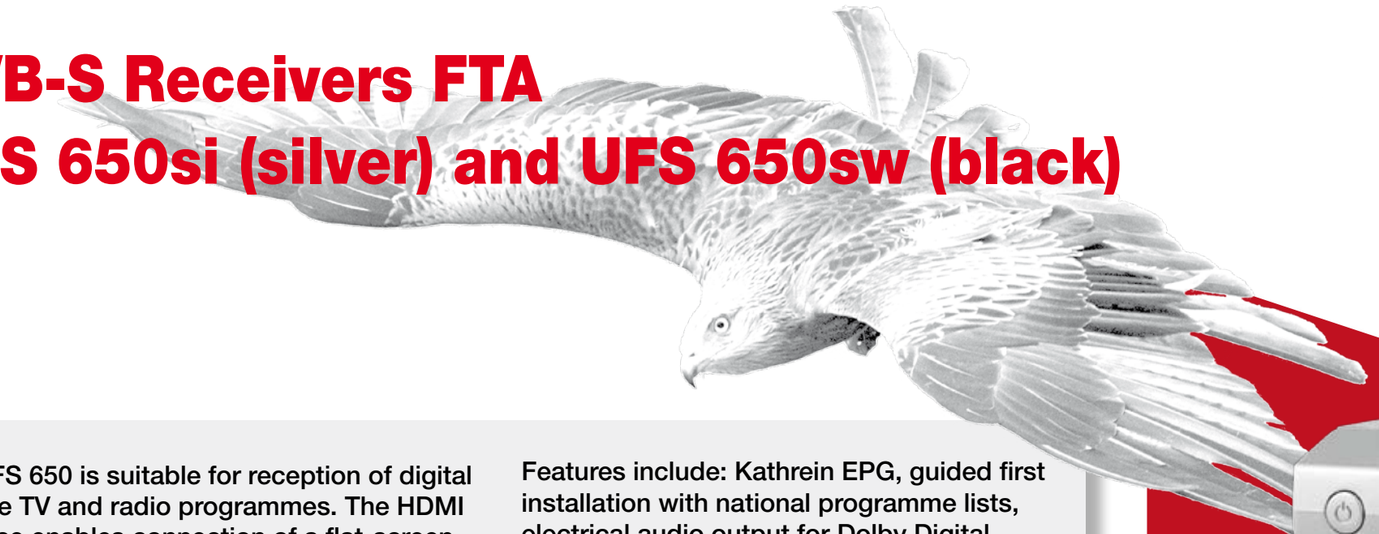
### Features

- Reception of digital satellite TV and radio programmes
- 4,000 programme memory positions
- 16-digit alphanumeric display with status icons shows programme names and programme information
- Conax decoding system embedded
- Common Interface for a CA module [1)]
- HDMI output for top video quality on your flat-screen TV set
- Upscaler to upscale Pal signals (576i) to 576p, 720p and 1080i
- Kathrein easy-use EPG with timer programming [2)]
- Guided first installation
- Automatic download of software
- Pre-programmed programme list - immediate viewing without a programme scan
- Suitable for software downloads via satellite and PC
- 4 favourite programme lists
- Automatic date and time setting via DVB data stream
- On-screen display (OSD) in 8 languages (D, GB, F, I, E, CZ, TR, NL)
- 8 timers; can also be programmed over EPG
- Language selection for programmes broadcast in several languages
- Cinch sockets for audio L/R signal
- Optical and electrical audio output for Dolby * Digital data stream (AC 3)
- CVBS, Y/C and RGB signal output programmable on Scart socket (TV)
- Videotext decoder with 800-page memory capacity and videotext generation (only via Scart)
- Programme scan
- Programme position sort function
- DiSEqC™1.0 and SCR single-cable control signals
- Infra-red remote control
- Mains switch
- External IR sensor can be connected (available as an accesory)
- Delivery scope: Infra-red remote control, batteries, manual, safety notes, Scart cable, power cable

1) CA modules and smart cards not supplied
2) Display of information only if broadcast by the programme provider
* Dolby is a registered trademark of Dolby Laboratories.
Technical data subject to change.

Satellite · Terrestrial · Cable

# DVB-S Receivers FTA
# UFS 650si (silver) and UFS 650sw (black)



**Stand-by mode power consumption < 0.5 Watt**

**HDMI port**

**Upscales to 576i, 576p, 720p and 1080i**

The UFS 650 is suitable for reception of digital satellite TV and radio programmes. The HDMI interface enables connection of a flat-screen TV for optimal viewing comfort. An integrated upscaler ensures optimal picture processing for flat-screen TVs.

Features include: Kathrein EPG, guided first installation with national programme lists, electrical audio output for Dolby Digital (AC 3), a video Cinch output and videotext with 800-page memory capacity.

The receiver is available in silver and black.

DVB S | EPG | HDMI | 4 Display | VT 800 | OSD | OTA | ~ 230 V | 12 V | on off

**Upscaler for a sharper image**

## Features

- Reception of digital satellite TV and radio programmes
- HDMI output for top video quality on your flat-screen TV
- Upscaler to upscale Pal signals (576i) to 576p, 720p and 1080i
- 4-digit display
- Kathrein EPG with timer programming [1)]
- Guided first installation with national programme lists
- Pre-programmed programme list - immediate viewing without a programme scan
- Suitable for software downloads via satellite and PC
- 8 favourite programme lists each for TV and radio
- 14 timers; convenient programming via EPG
- On-screen display (OSD) in 8 languages (D, GB, F, I, E, CZ, NL, TR)
- Language selection for programmes broadcast in several languages
- Electrical audio output for Dolby * Digital data stream (AC 3)
- CVBS and RGB signal output programmable on Scart socket
- Cinch sockets for AV signal
- Videotext decoder with 800-page memory capacity and videotext generation (only via Scart)
- Programme scan
- Automatic 4:3 and 16:9 format recognition with optional output format
- Automatic date and time setting via DVB data stream
- Programme position sort function
- DiSEqC™1.0 and SCR single-cable system control signals
- Infra-red remote control
- On/off switch (disconnection from 12 V supply)
- An external IR sensor can be connected (available as an accessory)
- Delivery scope: Infra-red remote control, batteries, manual, safety notes, Scart cable, 230 V/12 V power supply unit

1) Display of information only if broadcast by the programme provider
* Dolby is a registered trademark of Dolby Laboratories.

Technical data subject to change.

Satellite S21 Terrestrial TC Cable

# DVB-S Receivers
# For mobile use in caravans

Mobile

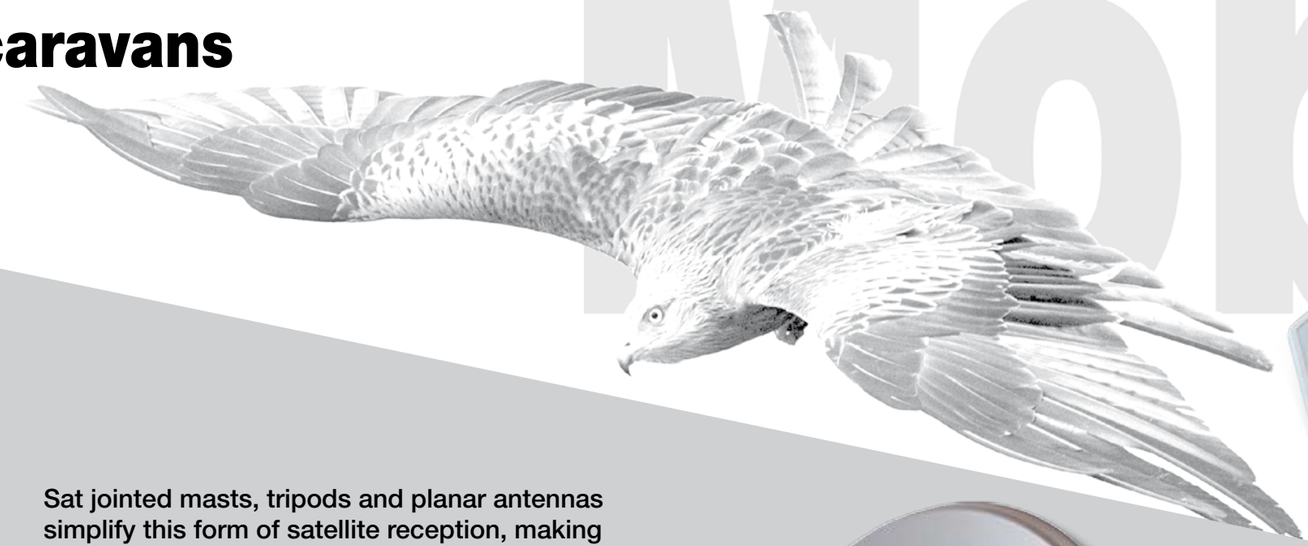
Whoever spends a lot of time travelling will not want miss out on their favourite TV/radio programmes and shows.

Kathrein have been taking their customers needs into account for years and have developed special satellite reception systems for use in motorhomes and caravans.

We have always set a high value on delivering the most convenience, the easiest operation and meeting the standards of our proven Kathrein quality.

Not only do we offer satellite reception systems with automatic alignment, but also offer a range of more economical, manually alignable ones.

Sat jointed masts, tripods and planar antennas simplify this form of satellite reception, making it as easy as possible.
For even more comfort, Kathrein caravan receivers are equipped with a special Sat Finder, making it quicker and easier to receive a desired satellite even with manually adjustable systems.



For more information on our caravan products, please read our latest caravan product brochure or visit our website “www.kathrein.de”


Camping & Caravan 2010
Radio and TV on holiday
HD TV – Enjoy high definition TV on holiday too
What you've always wanted - home comfort on the road
KATHREIN
Antennen · Electronic

Satellite S23 Terrestrial TC Cable

# HDTV-S Receiver for Mobile Use
# UFS 940sw (black)

## Mobile and easy to conceal

NEW

Quality aus Deutschland – Made in Germany

- Stand-by mode power consumption < 0.5 Watt
- Recording on external hard disk
- Kathrein easy-use EPG
- HDMI port

The UFS 940sw HDTV receiver is suitable for reception of digital satellite TV and radio programmes. This receiver allows you to receive both high-definition and standard television. An integrated Common Interface can accommodate one CA module for pay-TV programmes.
Due to its HDMI interface, the unit can be connected to a flat-screen TV set, allowing you to enjoy optimal viewing comfort.
The integrated Kathrein easy-use EPG is not only a well-structured electronic TV magazine, but also offers the possibility to take programmes from the respective EPG and add them to the timer.
Automatic downloading of new software and new programme lists (not in CAP mode) deliver top customer service. The UFS 940sw can be used to control the CAP 900/910, CAP 700/710 and CAP 600/610.

The USB 2.0 interface on the receiver's rear panel enables connection of an external USB hard disk, allowing you to record TV and radio broadcasts. Software and programme list updates can also be performed on this interface.

The UFS 940sw has been specially designed for concealed installation in caravans. Accessories for suspended or on-surface installation are included in the delivery scope.

The receiver is available in black.

DVB S/S2 · HD TV · Komfort EPG · DVR Ready · HDMI · VT 800 · OSD subscriptable · OTA · CI · USB 2.0 · ~ 230 V · 12 V · on off · Auto. SW · Auto. Prog.-L.

### Delivery scope

Scheduled delivery:
December 2009

### Features

- Reception of digital satellite TV and radio programmes in the DVB-S2 (HDTV) and DVB-S transmission standards
- Video decoding of MPEG-2 and MPEG-4/H.264 signals (HDTV)
- Kathrein easy-use EPG with intuitive timer programming [1]
- Common Interface for one
- CA module [2]
- HDMI output for optimal viewing comfort on your flat-screen TV
- Upscaler to upscale PAL signals (576i) to 576p, 720p and 1080i
- Integrated bracket and compact dimensions for concealed installation
- Mounting accessories for on-surface or under-shelf installation
- Removable remote control sensor for concealed installation
- Guided first installation
- Pre-programmed programme list - immediate TV viewing without a programme scan
- 31 pre-programmed satellites
- Automatic software and programme list downloads (not in CAP mode)
- Option to record TV and radio broadcasts on an external USB hard disk
- 12 V supply for mobile use
- 230 V power supply unit for stationary use
- Integrated electronic inverse-polarity protection
- Optical audio output for Dolby * Digital data stream (AC 3)
- Cinch sockets for AV signal (CVBS, stereo-audio)
- One USB 2.0 port on the rear panel for software updates using a USB stick
- 8 favourite programme lists each for TV and radio
- 1,000 timers (serial and interval)
- Videotext decoder with 800-page memory capacity
- Suitable for software updates (operational software and programme list separately) via satellite and USB stick
- Language selection for programmes broadcast in several languages
- On-screen display (OSD) in 10 languages (D, GB, F, I, E, CZ, NL, PL, TR, RUS)
- DiSEqC™1.0/1.1/1.2/USALS, CAP command set and SCR single-cable system control signals
- 4,000 programme memory positions
- Infra-red remote control with command set switching
- Stand-by < 0.5 W
- On/off switch (disconnection from 12 V supply)
- Delivery scope: IR remote control, batteries, IR sensor, 12 V connection cable with shock-proof plug (cigarette lighter and 12 V connection plug), TV connection cable 3 x Cinch to 3 x Cinch, power supply unit, 230 V/12 V, user manual

[1] Display of information only if broadcast by the programme provider
[2] CA modules and smart cards not included in delivery scope
* Dolby is a registered trademark of Dolby Laboratories

Technical data subject to change

Satellite 25 Terrestrial Cable

# DVB-S Receiver for Mobile Use
# UFS 640si (silver)

## Caravan receiver

Stand-by mode power consumption < 1 Watt

HDMI port

Upscales to 576i, 576p, 720p and 1080i

Integrated SAT Finder

The UFS 640si is suitable for the reception of digital satellite TV and radio programmes.

The HDMI interface allows one to connect the receiver to the HDMI interface on a suitable flat-screen TV for optimal viewing comfort.

The receiver's extensive scope of delivery includes an external power supply unit which allows the user to operate it on both 230 V and 12 V, as well as the accessories required for on-surface or under-shelf installation.

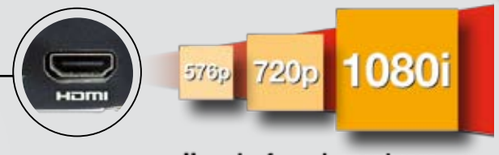
The UFS 640si cannot be used to control automatic turntables.

The receiver is available in silver.

DVB S | HDMI | EPG | 4 Display | VT 800 | OSD | OTA | 230 V | 12 V | on off

### Installation options

### Delivery scope




Upscaler for a sharper image

## Features

- Reception of digital satellite TV and radio programmes
- HDMI output for top video quality on your flat-screen TV set
- Upscaler to upscale Pal signals (576i) to 576p, 720p and 1080i
- 4-digit display
- Kathrein EPG with timer programming [1)]
- Antenna level shown on TV (optically and acoustically) for manual alignment of a parabolic reflector (Sat Finder)
- Guided first installation with national programme lists
- Pre-programmed programme list allows immediate viewing without a programme scan
- Suitable for software downloads via satellite and PC
- 12 V supply for mobile use, stationary operation
- 230 V power supply unit for stationary use
- 8 favourite programme lists each for TV and radio
- On-screen display (OSD) in 8 languages (D, GB, F, I, E, CZ, NL, TR)
- 14 timers; convenient programming via EPG
- Language selection for programmes broadcast in several languages
- Electrical audio output for Dolby * Digital data stream (AC 3)
- CVBS and RGB signal output programmable on Scart socket
- Cinch sockets for AV signal
- Videotext decoder with 800-page memory capacity and videotext generation (only via Scart)
- Automatic 4:3 and 16:9 format recognition with optional output format
- Programme scan
- Automatic date and time setting via DVB data stream
- Programme position sort function
- DiSEqC™1.0 and SCR single-cable control signals
- 4,000 programme memory positions
- Infra-red remote control
- On/off switch (disconnection from 12 V supply)
- External IR sensor for concealed receiver installation (included in delivery scope)
- Delivery scope: IR remote control, batteries, mounting support, IR sensor, TV connection cable 3 x Cinch to 3 x Cinch, 12 V connection cable with shock-proof plug (cigarette lighter and 12 V connection plug), 230 V/12 V power supply unit, manual and safety notes

[1)] Display of information only if broadcast by the programme provider
* Dolby is a registered trademark of Dolby Laboratories

Technical data subject to change

Satellite S27 TC Terrestrial Cable

# DVB-T

Nowadays, fewer and fewer viewers still receive their TV programmes in the traditional way via a roof antenna - primarily because of lack of programme variety, compared to satellite or cable reception.

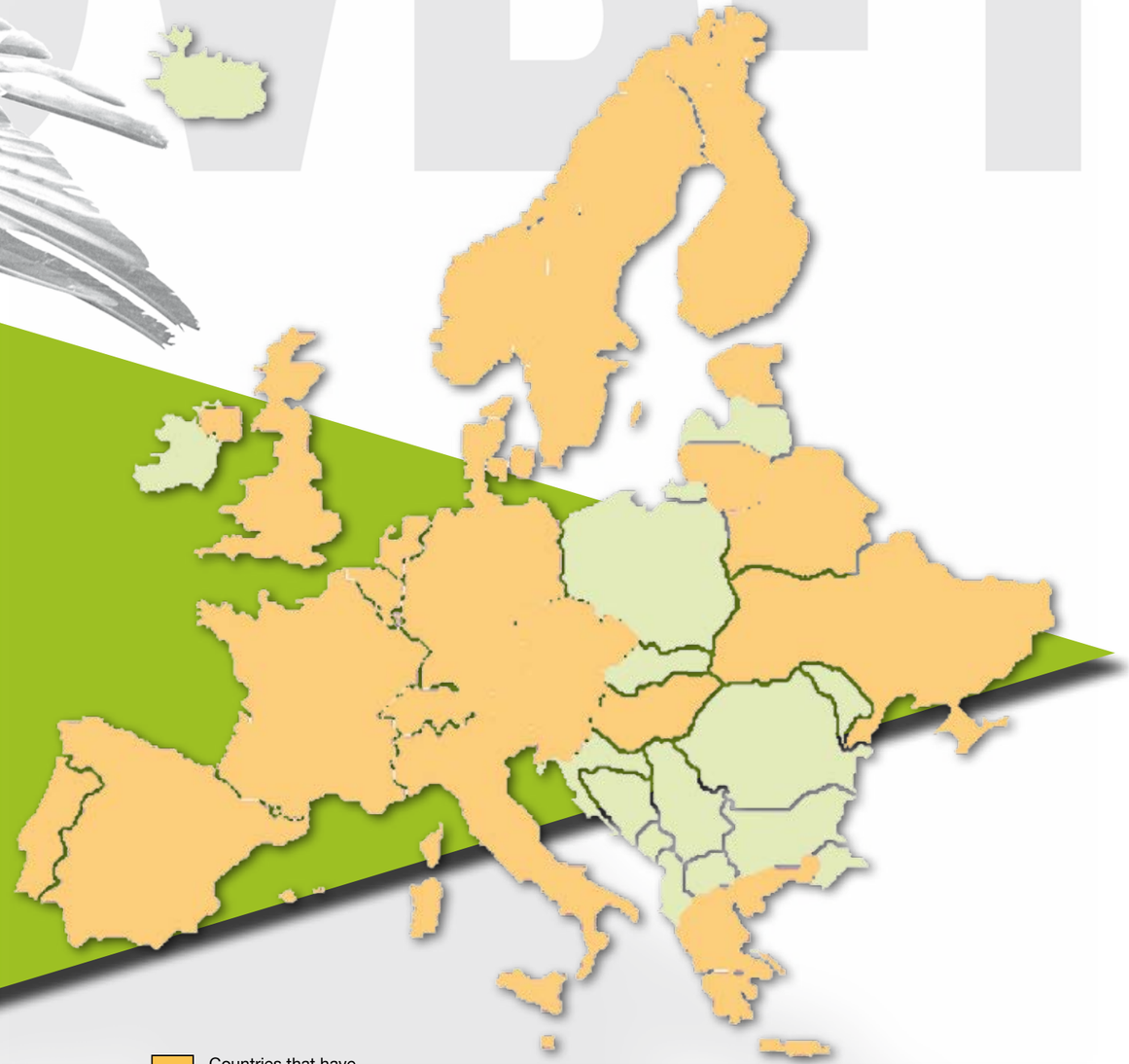
Here, however, terrestrial technology has broken new ground!
Switching to digital terrestrial transmission now gives you a whole series of benefits: More programmes, improved picture and sound quality, new interactive and multimedia applications, and best of all, portable and in some regions even mobile reception, e.g. in the car, on the bus or on the train.

**Advantage: A wide variety of programmes**
Digital transmission technology utilises the available TV programmes far more efficiently, enabling many more programmes to be transmitted. In those areas where conversion has already taken place and DVB-T is available, viewers can generally receive more than 20 programmes through the antenna.
And that's not all: transmission in "data containers" not only allows transmission of TV and radio, but also new interactive channels and multimedia services.

**Advantage: Mobile reception**
In principle, DVB-T not only allows "overall reception" but even mobile reception, i.e. while you are travelling by car, bus or train. This opens up new markets and applications for "TV everywhere" which far exceed what traditional TV has to offer.

**Advantage: Portable reception**
And for all this you will no longer need a connection outlet, nor will you suffer from cable spaghetti - After changing over to the powerful transmitters, in many cases a simple indoor antenna will be sufficient for excellent reception nearly everywhere, in your home, in the garden or on the move: "TV everywhere".

Digital TV on holiday, in the garden and anywhere indoors. All that with first class picture and sound quality with no irritating interference.



Countries that have launched DTT service

Countries that have selected the DVB-T standard; most are actively testing pilot projects

As of: September 2009

# DVB-T Receivers (Accessories)

## BZD 20

Active VHF/UHF antenna for the reception of digital terrestrial TV and radio programmes (DVB-T).

### Features BZD 20

- Reception range: VHF: 174-230 MHz, UHF: 470-862 MHz
- No specific alignment required due to nearly omni-directional characteristics
- For horizontal and vertical polarisation
- Appealing and compact design (Dimensions: 140 x 195 mm)
- Gain B III: 18 dB; UHF: 15 dB
- Remote feeding (5 V/30 mA) via the coax cable through the connected DVB-T receiver
- Very low noise figure
- Accessories supplied:
  - Stand for easy installation
  - 2 metre long connection cable with one straight and one angled IEC plug

## BZD 30

Active VHF/UHF indoor antenna for reception of digital terrestrial TV and radio programmes (DVB-T).

### Features BZD 30

- Reception range: VHF: 174-230 MHz, UHF: 470-862 MHz
- No specific alignment required due to nearly omni-directional characteristics
- For horizontal and vertical polarisation
- Appealing and compact design (Dimensions: 140 x 195 mm)
- Gain B III: 18 dB; UHF: 15 dB
- Remote feeding (5 V/30 mA) via the coax cable through the connected DVB-T receiver
- Extremely low noise figure
- Integrated tapping filter against GSM interferences
- Accessories supplied:
  - Stand for easy installation
  - Wall bracket with fixings
  - 2 metre long connection cable with one straight and one angled IEC plug

## BZD 40

Active VHF/UHF outdoor antenna for reception of digital terrestrial TV and radio programmes (DVB-T).

### Features BZD 40

- Reception range: VHF: 174-230 MHz; UHF: 470-862 MHz
- For horizontal and vertical polarisation
- Appealing and compact design (Dimensions: 204 x 196 mm)
- Easy to mount on walls, masts or balconies
- Connection: F-type socket with protective cap
- Gain: B III: 18 dB; B IV/V: 15 dB
- Remote feeding (5 V/30 mA) via the coaxial cable through the connected DVB-T receiver or through external power supply unit (5-25 V)
- Extremely low noise figure
- Accessories supplied:
  - Fixing material for wall or balcony mounting
  - 10 metre long connection cable, F-type plug and IEC plug

# DVB-T Receiver UFT 675sw (black)

NEW

Stand-by mode power consumption < 1 Watt

HDMI port

Upscales to 576i, 576p, 720p and 1080i

## Compact and flexible

The UFT 675sw is suitable for the reception of FTA digital terrestrial TV and radio programmes.
The HDMI interface allows one to connect the receiver to the HDMI interface on a suitable flat-screen TV, while an integrated upscaler processes the picture for optimal viewing comfort.

Features include: Kathrein EPG, guided first installation with national programme lists, electrical audio output for Dolby Digital (AC 3), a video Cinch output and videotext with 800-page memory capacity. An active DVB-T antenna can be connected without requiring an additional power supply unit.

The UFT 675 is available in black.

Upscaler for a sharper image

### Features

- Reception of FTA digital terrestrial TV and radio programmes
- HDMI output for top video quality on your flat-screen TV set
- Upscaler to upscale PAL signals (576i) to 576p, 720p and 1080i
- 4-digit display
- Kathrein EPG with timer programming [1]
- Guided first installation with national programme lists
- Programme sort according to pre-programmed programme list
- Logical channel number function
- Suitable for software downloads via PC (RS 232/RJ 11)
- 8 favourite programme lists each for TV and radio
- On-screen display (OSD) in 8 languages (D, GB, F, I, E, CZ, NL, TR)
- 14 timers; convenient programming via EPG
- Language selection for programmes
- broadcast in several languages
- Electrical audio output for Dolby * Digital data stream (AC 3)
- Scart socket with either FBAS or RGB signal output
- Cinch sockets for AV signal
- Videotext decoder with 800-page memory capacity and videotext generation (via Scart only)
- Automatic picture format recognition 4:3 and 16:9 with choice of viewing format
- 1,000 programme memory positions
- Automatic setting of date and time via DVB data stream
- Programme scan
- Programme position sort function
- 12 V power supply unit for mobile use, stationary operation
- 230 V power supply unit for stationary use
- Stand-by mode power consumption < 1 Watt
- Infra-red remote control
- Tuner with loop-through output
- On/off switch (disconnection from 12 V supply)
- An active DVB-T antenna (e.g. BZD 30, BZD 40) can be remote-fed via the RF input
- Facility to connect an external IR sensor
- Delivery scope: Infra-red remote control, batteries, user manual, safety notes, Scart cable, 230 V/12 V power supply unit

[1] Display of information only if broadcast by the programme provider
* Dolby is a registered trademark of Dolby Laboratories

Technical data subject to change

STC Satellite Terrestrial 31 Cable

# HDTV DVB-C Receiver
# UFC 960sw (black)

## Ready for recording and time shifting

NEW

- Stand-by mode power consumption < 1 Watt
- Recording/timeshift on external hard disk
- Kathrein easy-use EPG
- HDMI and Ethernet ports

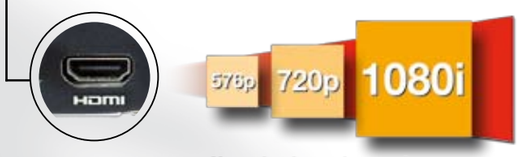
The DVB-C receiver UFC 960sw is suitable for the reception of digital (cable) TV and radio programmes.
The Conax 5.0 decoding system is embedded. In addition, the unit is equipped with a Common Interface for one CA module, allowing reception of additional pay-TV programmes.
The HDMI interface allows one to connect the receiver to the HDMI interface on a suitable flat-screen TV for optimal viewing comfort.
A YPbPr connection, a video composite connection and two Scart connections are additionally provided.

The receiver is fitted with an optical audio output so that the Dolby Digital data stream AC 3 can be transmitted to a Dolby Digital stereo system.
The USB port on the rear panel allows an external USB hard disk to be connected, enabling films and radio broadcasts to be recorded without any loss in quality. Time-shifted viewing is also possible.
The receiver operating system is LINUX-based and offers a wealth of convenient functions.

The UFC 960sw is available in black.

DVB C · HD TV · KOMFORT EPG · DVR Ready* · HDMI · 12 Display · JPEG · MP3 · VT 800 · OSD mehrsprachig · CI · CONAX 5.0 · Ethernet · USB 2.0 · LINUX · on off

Scheduled delivery:
December 2009




Upscaler for a sharper image

### Features

- Reception of digital cable TV and radio programmes
- Video decoding of MPEG-2 and MPEG-4/H.264 signals
- 4,000 programme memory positions
- 12-digit alphanumeric display shows programme names
- Kathrein easy-use EPG with timer programming [1]
- Integrated smart card reader [2]
- Conax 5.0 decoding system embedded
- Common Interface for one CA module [2]
- HDMI output enables connection to a flat-screen TV for optimal viewing comfort (HDTV)
- YPbPr output
- Ethernet interface for multi-media applications and to link the receiver into a network
- Optical audio output for Dolby * Digital data stream (AC 3)
- USB 2.0 interface
- An eSATA interface on rear panel
- Cinch sockets for AV signal (CVBS, stereo-audio)
- Option to record TV and radio broadcasts on an external USB hard disk [3]
- Guided first installation
- 1,000 timers (serial and interval timers)
- 8 favourite programme lists each for TV and radio
- Timer programming via EPG (Electronic Programme Guide)
- Suitable for software updates via PC and USB stick
- Automatic date and time setting via DVB data stream
- Videotext decoder with 800-page memory capacity
- On-screen display (OSD) in eight languages (D, GB, F, I, NL, PL, E, TR)
- Scart socket with selectable signal output, either CVBS, RGB or Y/C
- Automatic 4:3 and 16:9 picture format recognition with choice of viewing format
- Programme scan and sort function
- Suitable for UFO®*compact*
- processing systems
- LINUX-based operating system
- Infra-red remote control with command set switching
- Mains switch
- Stand-by power consumption: < 1 W

[1] Display of information only if broadcast by the programme provider
[2] CA modules and smart cards not included in the delivery scope
[3] External USB hard disk not included in the delivery scope
* Dolby is a registered trademark of Dolby Laboratories

Technical data subject to change.

# DVB-C Receiver CI

## UFC 662sw (black)

## Featuring HDMI port

NEW

Stand-by mode power consumption < 1 Watt

HDMI port

Upscales to 576i, 576p, 720p and 1080i

The UFC 662 is suitable for the reception of digital cable TV and radio programmes.

An HDMI interface enables the unit to be connected to a flat-screen TV, while a built-in upscaler processes the picture for optimal viewing comfort.

Features include: Kathrein-EPG, guided first installation with national programme lists, electrical audio output for Dolby Digital (AC 3), a video Cinch output and videotext with an 800-page memory capacity.

The receiver is available in black.

Scheduled delivery:
December 2009

### Features

- Reception of digital cable TV and radio programmes
- HDMI output for top video quality on your flat-screen TV set
- Upscaler to convert PAL signals to 576p, 720p and 1080i
- 4-digit display
- Common Interface for a CA module [1]
- Kathrein-EPG with timer programming [2]
- Guided first installation with national programme lists
- Sorting according to pre-programmed programme list
- Software/programme lists can be dowloaded via PC
- 8 favourite programme lists each for TV and radio
- On-screen display (OSD) in 8 languages (D, GB, F, I, E, CZ, NL, TR)
- 14 timers; can be programmed conveniently via EPG
- Language selection for programmes broadcast in several languages
- Electrical audio output via Dolby * Digital data stream (AC 3)
- CVBS and RGB signal output programmable on Scart socket
- Cinch sockets for AV signal
- Videotext decoder with 800-page memory capacity and videotext generation (only via Scart)
- Automatic 4:3 and 16:9 picture format recognition with choice of viewing format
- Programme scan
- Automatic date and time setting via DVB data stream
- Programme position sort function
- 4,000 programme memory positions
- Infra-red remote control
- On/off switch (disconnection from 12 V supply)
- Facility to connect an external IR sensor (available as an accessory)
- Designed for compatibility with UFO®*compac*t processing systems
- Delivery scope: Infra-red remote control, batteries, user manual, safety notes, Scart cable, power supply unit 230 V/12 V

[1] CA module not included in delivery scope
[2] Display of information only if broadcast by the programme provider
* Dolby is a registered trademark of Dolby Laboratories

Technical data subject to change.

STC 35

Satellite Terrestrial Cable

# Accessories

## CA Module AlphaCrypt Light UFZ 100

- For DVB-S and DVB-C receivers
- Integrated juvenile protection function
- Software update via satellite

## Infra-red Sensor URS 100

- External infra-red sensor for hidden installation of the receiver
- Suitable for receivers with an RJ 11 interface (e.g. UFS 790, UFS 650, UFS 733, UFT 675)
- Cable length: 2 m
- Packing unit/weight (pc./kg): 1 (10)/0.03

## USB Hard Disk UFZ 110

- Recommended and suitable for Kathrein receivers featuring a facility to connect an external hard disk
- Hard disk capacity: 300 GByte
- Just plug in to record
- Hard disk is controlled as well as switched on and off by the receiver
- No additional power supply unit required
- Only one USB cable required for connection
- Delivery scope: Leather case, USB cable, user manual and safety notes

## Exclusive Infra-red Remote Control RCU 672

- Exclusive remote control for Kathrein receivers
- Premium ergonomic design
- Distinctive plateau and different materials allow intuitive operation even in poor lighting
- Clear arrangement - buttons are divided into logical functional blocks
- Optimised for the receiver menu
- Soft-touch and innovative orientation guide on reverse side
- Switchable code (RCmm/RC6 Code)
- Includes brand-name batteries
- Suitable for the receivers:
  UFS 922, UFS 912, UFS 910, UFS 904, UFS 903, UFS 902, UFS 822, UFS 821, UFS 940, UFS 740, UFS 712, UFS 710, UFS 705, UFS 700, UFS 650, UFS 640, UFS 601, UFT 671, UFT 675, UFC 960, UFC 861, UFC 662

# Useful information on the Electronic Programme Guide (EPG)

## Premium tvtv EPG

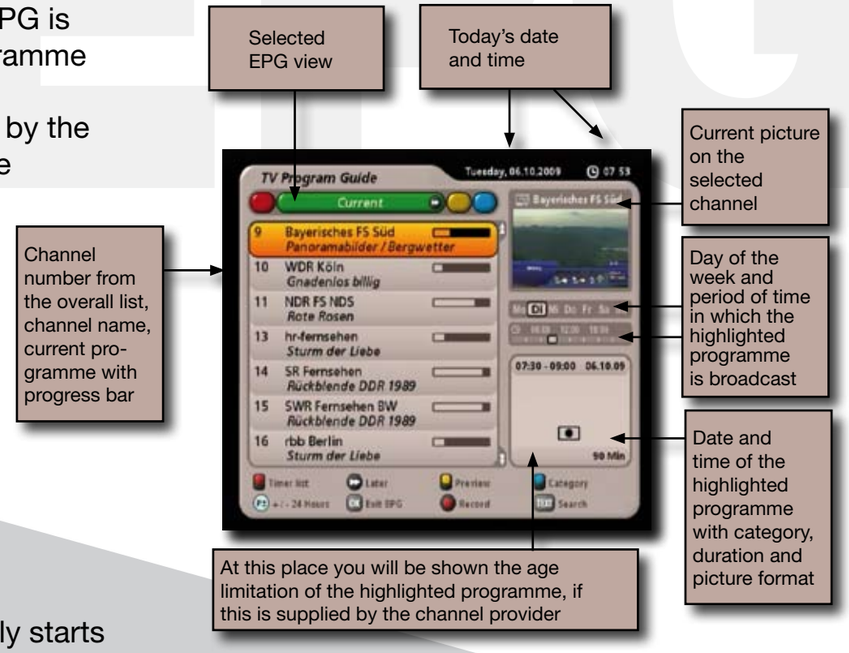
The premium tvtv EPG is a professionally edited programme guidewhich delivers all EPG information free of charge for approx. 100 programmes up to 14 days in advance.

Not only is it a well-structured electronic TV guide, but also offers a facility to take programmes from the respective EPG and include them in the timer.
In addition, it is possible to sort programme information according to categories and to create and administrate one's own programme tips.
What's more, the premium tvtv EPG also features an extensive search function which enables one, for example, to search for reruns, actors or key words.

TV Program Guide
powered by tvtv
'More Episodes'
Wed kabel eins King of Queens (13)
Wed ATV+ 17:55 - 18:25 King of Queens (1)
Wed ATV+ 18:25 - 18:50 King of Queens (2)
Wed ATV+ 18:50 - 19:20 King of Queens (3)
Thu ATV+ 03:50 - 04:15 King of Queens (1)
Thu ATV+ 04:15 - 04:45 King of Queens (2)
Thu kabel eins 12:30 - 13:00 King of Queens (12)
15:40 - 16:10 11.02.09
Comedy-Serie
USA, 2005
With Kevin James, Leah Remini, Jerry Stiller
Director: Michael J. Weithorn
30 Min

## Kathrein easy-use EPG

The Kathrein easy-use EPG is a latest-generation programme guide. It delivers all EPG information (if broadcast by the programme provider) free of charge, without the user having to change the channel currently being viewed, up to one week in advance (depending on the programme provider).


Selected EPG view
Today's date and time
Current picture on the selected channel
Channel number from the overall list, channel name, current programme with progress bar
Day of the week and period of time in which the highlighted programme is broadcast
Date and time of the highlighted programme with category, duration and picture format
At this place you will be shown the age limitation of the highlighted programme, if this is supplied by the channel provider
TV Program Guide
Tuesday, 06.10.2009
Current
9 Bayerisches FS Süd Panoramabilder / Bergwetter
10 WDR Köln Gnadenlos billig
11 NDR FS NDS Rote Rosen
13 hr-fernsehen Sturm der Liebe
14 SR Fernsehen Rückblende DDR 1989
15 SWR Fernsehen BW Rückblende DDR 1989
16 rbb Berlin Sturm der Liebe
07:30 - 09:00 06.10.09
90 Min

### Kathrein easy-use EPG data update

The receiver automatically starts updating the EPG data at 03:00 a.m.; the EPG data of the first 25 channels in the channel list are thereby updated. If the receiver has been switched off, (mains switch) or is in operation, updating is postponed. The receiver will then update the EPG data the next time the receiver s switched from operational mode to stand-by mode.

After updating has been performed, the receiver automatically switches back to stand-by mode.

## Kathrein EPG

The Kathrein-EPG is a programme guide which provides free EPG information (as long as this information is broadcast by the programme provider). It charts the programmes of a desired channel at a glance.
Timers can also be set in the EPG.

# Information on Software and Programme List Updates

Kathrein updates (software and programme lists) are usually provided in two different ways:
via satellite and on the website “www.kathrein.de” (Service→Software and Download→Receivers). On www.kathrein.de, you can get information on the latest software and programme lists available for your receiver, at any time. You will also be able to view a list of all the differences to the older version.

## Update options

There are several ways to update your Kathrein receiver. These options can differ from receiver to receiver.
The following update options are available for the receivers presented in this brochure:

- Update via satellite (for all satellite receivers, no PC with Internet access required)
- Update via PVR manager (software must first be downloaded to a PC/laptop from “www.kathrein.de”)
- Update via USB stick (software must first be downloaded to a PC/laptop from “www.kathrein.de”)

| | |
|---|---|
| UFS 922, UFS 910, UFS 912, UFS 822, UFS 821 | Update possible through all three means |
| UFS 902, UFS 903, 904 and 940 | Update via satellite or USB stick |
| UFS 700, 705, 710, 712 and 740 | Update via satellite or PVR manager |
| UFC 861 | Update via PVR Manager or via USB stick |
| UFS 790, 733, 650 and 640 | Update via satellite |
| UFT 675 | see “www.kathrein.de” |
| UFC 762 | Via cable, only if provided by the cable network operator |

### The receivers UFS 922, 912, 904 and 940 offer a special feature

After being switched into stand-by mode, the receivers will automatically check if new software or a programme list is available to be downloaded via satellite. If a new software/programme list is available, the receivers will display the following message the next time they are started as seen here in the UFS 922:

Neue Programmliste verfügbar
Eine Aktualisierung für die Programmliste ist verfügbar. Die Sortierung Ihrer Programmliste bleibt erhalten.
BACK Abbrechen
OK Programmliste aktualisieren

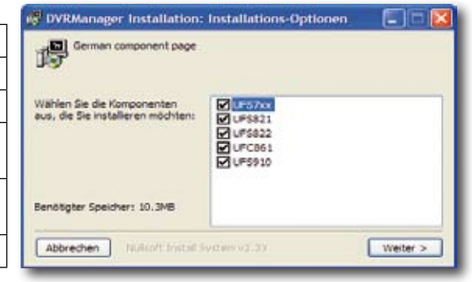
**Kathrein offers a special service for software updates. You can register for an infoservice newsletter on “www.kathrein.de” and automatically receive an e-mail as soon as new software is available for your receiver.**

# About the PVR Manager

The PVR manager offers various options to perform uploads and downloads between your receiver and a PC/laptop via network/USB/RJ 11-RS 232 connection. Software and instruction manuals can be downloaded free of charge from our website “www.kathrein.de”.

During installation of the PVR manager, you can define the receiver on which you intend to use the PVR manager.
The PVR Manager currently supports the following receiver types:

| | |
|---|---|
| UFS 922, UFS 912 | Network connection |
| UFS 910 | Network connection |
| UFS 822 | Network connection |
| UFS 700, 705 and 710 | Connection via RJ 11 (receiver) and RS 232 (PC/laptop) (as of software version 2.10) |
| UFS 712 and 740 | Connection via RJ 11 (receiver) and RS 232 (PC/laptop) (as of software version 2.01) |
| UFC 861 | Network connection |




After you have defined the receiver in use and software installation has been completed, you can then use the various functions the PVR manager offers.

Note on UFS 7xx:
The required cable (RJ 11 to RS 232 and a null modem cable) can be ordered from our Service Centre, ESC in Grassau:
The address is ESC Electronic Service Chiemgau GmbH · Bahnhofstraße 108 · 83224 Grassau/GERMANY
Tel.: ++49(0) 86 41 95 45-0 Fax: ++49(0) 86 41 95 45 35 or 95 45 36
E-mail: service@esc-kathrein.de Internet: http://www.esc-kathrein.de

# About recording

In addition to the Kathrein receivers with an integrated hard disk (UFS 922, UFS 822 and UFC 861) which include a standard recording function, it is also possible to record broadcasts with the HDTV receivers UFS 912, UFS 910, UFS 904, UFS 903 and UFS 902. To do this, an external USB storage medium must be connected to one of the two USB 2.0 interfaces on the receiver‘s rear panel. The unit can then not only record broadcasts transmitted in standard format but also record those broadcast in HDTV format. Needless to say, the receiver can also play back recordings saved on the USB storage medium.

In order to use this new function, the following must be observed:

**Please note that the USB 2.0 socket on the receiver only has an output current of 500 mA. For some hard disk drives, this current is insufficient for smooth operation. To guarantee optimal supply to the hard disk, you can either use a hard disk drive with a built-in power supply or you can insert a USB 2.0 hub with its own power supply unit.**
**Furthermore, the USB external storage medium must be formatted to “FAT32”. Formatting can also be performed through the receiver!**

Note: Kathrein recommends the UFZ 110 USB hard disk.

# Technical Data

| | | DVB-S | | | | | |
|---|---|---|---|---|---|---|---|
| **TYPE** | | **UFS 922si** | **UFS 922sw** | **UFS 912si** | **UFS 912sw** | **UFS 903si** | **UFS 903sw** |
| Order no. | | 20210121 | 20210122 | 20210147 | 20210148 | 20210149 | 20210137 |
| Colour | | Silver | Black | Silver | Black | Silver | Black |
| **RF range** | | | | | | | |
| Input frequency range | MHz | 950-2,150 | | 950-2,150 | | 950-2,150 | |
| Input level range | dBµV | 44-83 | | 44-83 | | 44-83 | |
| **TV system video** | | | | | | | |
| Modulation, FEC, de-multiplexer | | DVB-S/DVB-S2 standard | | DVB-S/DVB-S2 standard | | DVB-S/DVB-S2 standard | |
| Video resolution | | CCIR 601 (720 x 576 lines)<br>576p, 720p, 1080i | | CCIR 601 (720 x 576 lines)<br>576p, 720p, 1080i, 1080p | | CCIR 601 (720 x 576 lines)<br>576i, 576p, 720p, 1080i | |
| Video decoding | | MPEG-2, MPEG-4 compatible | | MPEG-2, MPEG-4 compatible | | MPEG-2, MPEG-4 compatible | |
| Input data rate | MSymb/s | 2-45 (30 for DVB-S2/8PSK) | | 2-45 (30 for DVB-S2/8PSK) | | 2-45 (30 for DVB-S2/8PSK) | |
| S/N | dB | > 53 | | > 53 | | > 53 | |
| **TV system audio** | | | | | | | |
| Decoding | | AC3, MPEG-1, Layer 1, 2 and 3 | | AC 3, MPEG-1, Layer 1, 2 and 3 | | AC3, MPEG-1, Layer 1, 2 and 3 | |
| Sampling rate | kHz | 32/44.1/48 | | 32/44.1/48 | | 32/44.1/48 | |
| S/N | dB | > 65 | | > 65 | | > 65 | |
| **Hard disk recorder** | | | | | | | |
| Memory capacity | GByte | 500 | | - | | - | |
| Recording time | Std. | ca. 300 for SDTV<br>ca. 100 for HDTV<br>(depending on the data rate and changes of picture contents) | | - | | - | |
| **Power supply** | | | | | | | |
| Mains voltage | $V_{AC}$/Hz | 100-240/50-60 | | 100-240/50-60 | | 230 (± 10 %)/50 | |
| Power consumption (operation/stand-by) | W | 65/typ. 30/<1 | | < 26/< 0.5 | | < 22/< 8 | |
| LNB supply (horiz./vert.) | V/mA | 14/18, Max. 400 | | 14/18, Max. 400 | | 14/18, Max. 350 | |
| Control signal | kHz | 22; ToneBurst;<br>DiSEqC™1.0/1.1/1.2/1.3,<br>SCR single-cable system | | 22; DiSEqC™1.0/1.1/1.2/1.3,<br>SCR single-cable system | | 22; DiSEqC™1.0/1.1/1.2/USALS,<br>SCR single-cable system | |
| **Connections** | | | | | | | |
| Sat-IF input/output (loop-through) | | 4 x F-type socket | | 2 x F-type socket | | 2 x F-type socket | |
| Connection TV/VCR | | 2 x Scart socket | | 2 x Scart socket | | 1 x Scart socket | |
| Video output (analogue) | | 3 x Cinch socket (YPbPr)/<br>1 x Cinch socket | | 3 x Cinch socket (YPbPr)/<br>1 x Cinch socket | | 1 x Cinch socket | |
| Video output (digital) | | 1 x HDMI | | 1 x HDMI | | 1 x HDMI | |
| Audio output (analogue) | | 2 x Cinch socket | | 2 x Cinch socket | | 2 x Cinch socket | |
| Audio digital output (digital) | | Standard optical (SPDIF) | | Standard optical (SPDIF) | | Standard optical (SPDIF) | |
| Common Interface/decoding system | | For 2 CA modules/- | | For 2 CA modules/- | | For 1 CA module/- | |
| Data interface | | 3 x USB 2.0, Ethernet, RS 232 | | 3 x USB 2.0 | | 1 x USB 2.0, RJ 11 | |
| **General** | | | | | | | |
| Ambient temperature | °C | Max. +5 to +40 | | Max. +5 to +40 | | Max. +5 to +40 | |
| Dimensions (W x H x D) | mm | 435 x 69 x 303 | | 342 x 67 x 273 | | 310 x 55 x 210 | |
| Weight | kg | 3.6 | | < 3 | | < 2 | |

Technical data subject to change.

# Technical Data

| | | DVB-S | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **TYPE** | | **UFS 904sw** | **UFS 790si** | **UFS 790sw** | **UFS 733si** | **UFS 733sw** | **UFS 650si** | **UFS 650sw** |
| Order no. | | 20210152 | 20210125 | 20210126 | 20210131 | 20210132 | 20210107 | 20210108 |
| Colour | | Black | Silver | Black | Silver | Black | Silver | Black |
| **RF characteristics Sat** | | | | | | | | |
| Input frequency range | MHz | 950-2,150 | 950-2,150 | | 950-2,150 | | 950-2,150 | |
| Input level range | dBµV | 44-83 | 44-83 | | 44-83 | | 44-83 | |
| **RF characteristics terr.** | | | | | | | | |
| Input frequency range | MHz | - | 174-230 and 470-862 | | - | | - | |
| Channel bandwith | MHz | - | 7/8, automatic switching | | - | | - | |
| Modulation type | | - | COFDM 2k, 8k | | - | | - | |
| Mapping | | - | QPSK, 16 QAM, 64 QAM | | - | | - | |
| Guard Interval | | - | 1/4, 1/8, 1/16, 1/32 | | - | | - | |
| FEC | | - | 1/2, 2/3, 3/4, 5/6, 7/8 | | - | | - | |
| Input level range | dBµV | - | 28-86 at 16 QAM) | | - | | - | |
| **TV system video** | | | | | | | | |
| Modulation, FEC, de-multiplexer | | DVB-S/DVB-S2 standard | DVB-S standard/DVB-T standard | | DVB-S standard | | DVB-S standard | |
| Video resolution | | CCIR 601<br>(720 x 576 lines)<br>576i, 576p, 720p, 1080i | CCIR 601 (720 x 576 lines),<br>567i, 576p, 720p, 1080i | | CCIR 601 (720 x 576 lines),<br>567i, 576p, 720p, 1080 | | CCIR 601 (720 x 576 lines),<br>567i, 576p, 720p, 1080i | |
| Video decoding | | MPEG-2, MPEG-4 compatible | MPEG-1, MPEG-2 compatible | | MPEG-1- and MPEG-2,<br>Layer 1 and 2 | | MPEG-1, MPEG-2 compatible | |
| Input data rate | MSymb/s | 2-45<br>(30 for DVB-S2/8PSK) | 2-45/5-32 (30 for DVB-S2/8PSK) | | 2-45 (30 for DVB-S2/8PSK) | | 2-45/5-32 (30 for DVB-S2/8PSK) | |
| S/N | dB | > 53 | > 53 | | > 53 | | > 53 | |
| **TV system audio** | | | | | | | | |
| Decoding | | AC3, MPEG-1,<br>Layer 1, 2 and 3 | MPEG-1 and MPEG-2,<br>Layer 1 and 2 | | MPEG-1 and MPEG-2,<br>Layer 1 and 2 | | MPEG-1,<br>Layer 1 and 2 | |
| Sampling rate | kHz | 32/44.1/48 | 32/44.1/48 | | 32/44.1/48 | | 32/44.1/48 | |
| S/N | dB | > 65 | > 65 | | > 65 | | > 65 | |
| **Power supply** | | | | | | | | |
| Mains voltage | $V_{AC}$/Hz | 230 (± 10 %)/50-60 | 230 ± 10 %/50 | | 230 ± 10 %/50 | | 100-240/50-60 | |
| Power consumption (operation/stand-by) | W | < 26/0.5 | < 22/< 8 | | < 22/< 8 | | < 26/< 1 | |
| LNB supply (horiz./vert.) | V/mA | 14/18, Max. 400 | 14/18, Max. 350 | | 14/18, Max. 400 | | 14/18, Max. 400 | |
| Control signal | kHz | 22; DiSEqC™<br>1.0/1.1/1.2/USALS,<br>SCR single-cable<br>system | 22; DiSEqC™1.0,<br>SCR single-cable system | | 22; DiSEqC™1.0,<br>SCR single-cable system | | 22; DiSEqC™1.0,<br>SCR single-cable system | |
| **Connections** | | | | | | | | |
| Sat-IF input/output (loop-through) | | 2 x F-type socket | F-type socket/IEC socket | | F-type socket | | 2 x F-type socket | |
| Connection TV/VCR | | 1 x Scart socket | 2 x Scart socket | | 2 x Scart socket | | 2 x Scart socket | |
| Video output (analogue) | | 1 x Cinch socket | - | | - | | 1 x Cinch socket | |
| Video output (digital) | | 1 x HDMI | 1 x HDMI | | 1 x HDMI | | 1 x HDM | |
| Audio output (analogue) | | 2 x Cinch socket | 2 x Cinch socket | | 2 x Cinch socket | | 2 x Cinch socket | |
| Audio digital output (electrical) | | 1 x Cinch socket | 1 x Cinch socket | | Cinch socket | | Cinch socket | |
| Audio digital output (optical) | | Standard optical (SPDIF) | Standard optical (SPDIF) | | Standard optical (SPDIF) | | - | |
| Common Interface/decoding system | | For 1 CA module/- | For 1 CA module/Conax embedded | | For 1 CA module/Conax embedded | | - | |
| Data interface | | 1 x USB socket 2.0,<br>RJ 11 socket | RJ 11 socket | | RJ 11 socket | | RJ 11 socket | |
| **General** | | | | | | | | |
| Ambient temperature | °C | Max. +5 to +40 | Max. +5 to +40 | | Max. +5 to +40 | | Max. +5 to +40 | |
| Dimensions (W x H x D) | mm | 310 x 55 x 210 | 280 x 45 x 185 | | 280 x 45 x 190 | | 255 x 47 x 190 | |
| Weight | kg | < 2 | < 3 | | < 2 | | 1.0 | |

Technical data subject to change.

Satellite S43 Terrestrial TC Cable